

the packet for the digital interface is constructed by:
a packet header 500 of 16 bytes; and packet information
501. The packet header 500 comprises: a packet length
502 indicative of a length of packet information; a tag
5 503 indicative of a format of the packet; a channel 504
for identifying the packet; a transaction code 505
indicative of a kind of packet; a synchronization field
506 which is used for transmitting and receiving
synchronization information between the transmission
10 side and the reception side; a CRC 507; and an
expansion header 508.

The packet for the digital broadcast signal
shown in Fig. 4 is stored into the packet information
501. There is a case where the packet for the digital
15 broadcast signal which is stored into the packet
information 501 has already been encrypted in order to
protect the digital broadcast signal. Encrypting mode
information showing whether the packet information 501
has already been encrypted or not is stored in the
20 synchronization field 506. As encrypting mode
indicator, for example, information of 2 bits is used,
thereby showing four states of "copy freely", "copy one
generation", "no more copies", and "copy never". The
states other than "copy freely" indicate that the
25 packet information 501 has been encrypted. The term
"no more copies" denotes that although the state was
inherently "copy one generation", since data has been
recorded once, the apparatus enters a state where the

copy is no longer possible. The encrypting mode indicator is set by the apparatus for sending the data to the digital interface.

When the digital signal recording and reproducing apparatus 100 records the digital broadcast signal inputted from the digital interface onto the recording medium 107, recording medium copy control information indicative of the copy control information of the data to be recorded is written onto the recording medium 107 simultaneously with the digital broadcast signal. As recording medium copy control information, for example, information of 2 bits is used, thereby showing four states of "copy freely", "copy one generation", "no more copies", and "copy never". It is also possible to construct the recording medium copy control information in a manner such that in case of the state other than "copy freely", the data to be written onto the recording medium is encrypted in order to protect it. Upon recording of the digital broadcast signal, the recording medium copy control information is determined on the basis of: the copy control information included in the digital broadcast signal; the copy freely signal protection information included in the digital broadcast signal; and the encrypting mode indicator included in the header of the packet for the digital interface.

When the digital signal recording and reproducing apparatus 100 reproduces the digital

broadcast signal recorded on the recording medium 107
and outputs it from the digital interface, the
encrypting mode indicator which is set into the header
of the packet for the digital interface is determined
5 on the basis of: the recording medium copy control
information recorded on the recording medium 107; the
copy control information included in the digital
broadcast signal; and the copy freely signal protection
information included in the digital broadcast signal.

10 The setting of the recording medium copy
control information upon recording of the digital
broadcast signal and the setting of the encrypting mode
indicator upon reproduction of the digital broadcast
signal are performed under the control of the control
15 circuit 108 of the digital signal recording and
reproducing apparatus 100. The detection of the copy
control information and the copy freely signal
protection information is performed by the selecting
circuit 104. The setting of the recording medium copy
20 control information is performed by the recording
signal processing circuit 105. The detection of the
recording medium copy control information is performed
by the reproduction signal processing circuit 106. The
detection and the setting of the encrypting mode
25 indicator are performed by the interface circuit 101.

A setting method of the recording medium copy
control information upon recording of the digital
broadcast signal will now be described with reference